#### Reading a Reviewed Event Bulletin

A Reviewed Event Bulletin (REB) -- as produced by the International Data Centre (IDC) -- provides a wealth of information. An REB typically covers a 24 hour period beginning at 0:00 GMT and describes every event recorded during that period which meets publication criteria. Analysts review, revise and verify the solution provided for each event. The result is a daily, human-reviewed bulletin typically describing 50 to 100 events. Most events described in an REB are natural in origin (earthquakes), though many are anthropogenic (quarry blasts, nuclear explosions, etc.).

The full specification for the format of the Reviewed Event Bulletin is provided in the official IDC Documentation. The volume "Formats and Protocols for Messages" [IDC3.4.1 Rev 1] provides a detailed description of the message-based formats -- including the REB -- utilized by the IDC. Below is an annotated REB, highlighting the key components of the report format.

### **Bulletin Header:**

Format and delivery information

#### **Event Title Block:**

Event identifier and geographic region; marks the beginning of each new event report; typically, an REB will describe 50 to 100 events

## **Bulletin Title Block:**

Title and time-range (typically 24 hours) of bulletin, and time the report was generated

BEGIN IMS1.0 MSG TYPE DATA

MSG\_ID 3832607 GSE\_IDC

PROD\_ID 4 910

DATA\_TYPE BULLETIN IMS1.0:SHORT

Reviewed Event Bulletin of the CTBT\_IDC from 2002/05/10 00:00:00 to 2002/05/11 00:00:00, generated 2002/05/16 15:28:56

EVENT 1165680 EASTERN GREENLAND

Date Time RMS Latitude Longitude Smaj Smin Az Depth Err Ndef Nsta Gap mdist Mdist Qual OrigID 0.87 78.6260 -18.7056 24.9 13.9 2002/05/10 02:52:53.75 0.76 20 0.0f 13 13 105 7.00 75.79 m i uk IDC\_REB 1168870

Magnitude Err Nsta Author OrigID 3.4 0.2 3 IDC REB 1168870 11 IDC\_REB 3.6 0.1 1168870 3.8 0.1 14 IDC REB 1168870 mb1mx 3.8 0.1 25 IDC\_REB 1168870 3.1 0.4 2 IDC\_REB 1168870 Ms1 3.1 0.4 2 IDC\_REB 1168870 ms1mx 2.7 0.1 18 IDC\_REB 1168870

# **Origin Block:**

Event time, location, error, and quality

# Magnitude Sub-block:

Summary of event magnitudes

**Phase Block:** 

List of detections

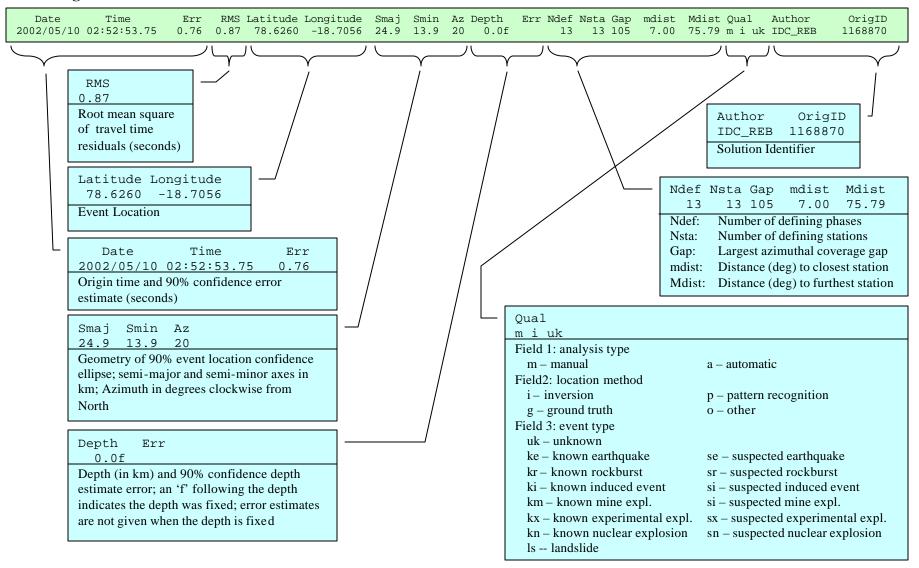
Sta Dist EvAz Phase Time Azim AzRes Slow SRes Def SNR Per Qual Magnitude ArrID TRes SPITS 76.3 Pn 02:54:36.790 -0.6 296.5 8.6 -5.1 T\_\_\_ 67.0 0.33 a\_\_ ML 3.1 9112519 mb1 3.4 SPITS 7.00 76.3 Sn 02:55:54.132 -4.7 315.0 24.3 47.2 22.5 6.4 2.0 0.33 a 9112524 ARCES 14.64 104.0 Pn 02:56:25.389 5.4 327.4 0.6 13.6 -0.1 5.4 0.2 0.33 m\_ ML 3.2 9139249 4.3 0.7 330.5 -12.6 NOA 19.96 134.7 P 02:57:27.745 10.8 -0.0 T\_\_\_ 0.1 0.33 m\_ ML 3.8 9139250 3.4 FRB 20.81 253.1 P 02:57:36.024 -0.1 22.6 -2.7 10.9 0.0 T\_\_\_ 3.6 0.80 a\_\_ mb 3.7 9112517 mb1 3.9 3.8 9112525 HFS 21.19 132.1 P 02:57:42.018 1.7 14.0 31.1 10.3 -0.5 T 8.9 2.3 0.50 a\_ mb mb1 3.8 4.0 0.59 a\_ mb FINES 21.99 115.3 P 02:57:49.825 1.0 347.0 8.9 9.4 -1.3 T 21.1 4.0 9111776 mb1 4.1 1.0 T\_\_ EKA 23.99 157.9 P 02:58:09.682 0.2 347.7 -4.8 10.5 3.6 0.67 m\_ mb 3.5 9139252 3.7 SCHO 28.83 243.3 P 02:58:52.951 -0.2 24.3 9.8 0.9 T\_\_ 7.8 1.2 0.50 a\_ mb 4.1 9111755 mb1 4.1 YKA 30.84 295.7 P 02:59:10.292 -0.5 16.3 -4.9 8.2 -1.0 T\_\_\_ 5.7 0.2 0.51 m\_ mb 3.2 9139251 mb1 3.5 33.60 322.5 P 02:59:36.075 1.1 223.4 -152. 14.6 5.9 T\_\_ 2.8 0.1 0.80 m\_ mb 2.9 9139248 ILAR 3.3 03:16:28.007 -10.5 191.2 173.1 36.5 -0.3 \_\_\_\_ ULM 38.76 271.1 LR 70.8 18.26 a\_\_ 3.6 9142520 Ms 3.5 ZAL 40.27 62.8 LR 03:23:17.327 117.0 202.0 -140. 45.3 2.9 \_\_\_\_ 2.7 9142511 10.0 18.82 a\_\_ Ms 2.7 MKAR 46.68 68.0 P 03:01:22.876 -0.5 358.3 13.9 4.9 -2.9 T\_\_ 22.5 0.9 0.45 a\_ mb 4.0 9111864 mb1 4.0 PDAR 48.63 281.1 P 03:01:39.976 1.1 56.0 -7.5 3.5 -4.2 T\_\_ 3.9 0.3 0.64 a\_\_ mb 3.3 9111830 mb1 3.7 TXAR 60.47 271.4 P 03:03:04.526 -0.4 36.1 4.5  $-0.7 \text{ T}_{-}$  7.0 0.7 0.73 a\_ mb 3.7 9111831 mb1 4.3 75.79 141.7 P 03:04:39.924 -1.3 336.3 -6.6 5.2 -0.5 T<sub>\_\_</sub> 10.2 1.1 0.64 a\_ mb 4.1 9112046 BGCA 4.1

STOP

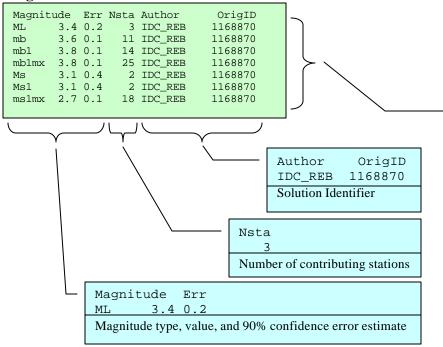
**Bulletin Footer:** 

End of message

# **Origin Block:**



## **Magnitude Sub-block:**



Local magnitude MLmb Body wave magnitude Body wave magnitude extended down to 2 degrees distance mb1 and incorporating station corrections mb1mx Maximum likelihood body wave magnitude extended down to 2 degrees distance and incorporating station corrections; supplemented with noise measurements at non-detecting stations to provide an upper bound estimate Ms Surface wave magnitude Surface wave magnitude extended down to 2 degrees distance Ms1and incorporating station corrections ms1mx Maximum likelihood surface wave magnitude extended down to 2 degrees distance and incorporating station corrections; supplemented with noise measurements at non-detecting stations to provide an upper bound estimate

#### **Phase Block:**

